

### REMARKS

Claims 1-3, 5-6 and 9-14 are presently pending. In the Examiner's Office Action dated November 10, 2009, Claims 1, 3, 5-6, and 9-14 were finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Battigelli et al. in view of Jensen et al. and Vignesoult et al., with evidence from Trabbold et al. and Audren et al. Claim 2 was finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Battigelli et al. in view of Bernard et al., Jensen et al., and Vignesoult et al., and further in view of Balcerowiak et al. (Journal article). By this Amendment after Final, Applicants are amending Claims 1, 3, 5, 12 and 14. Thus, Claims 1-3, 5-6 and 9-14 are still currently pending in this application.

#### These Five References Cannot Support an Obviousness Rejection

Where claims are rejected based on the combination of several prior art references, it is the Examiner's burden to present evidence that a person of ordinary skill in the art would: (1) have had reason to attempt to make the composition or device; and (2) have had a reasonable expectation of success in doing so. See Noelle v. Lederman, 355 F.3d 1343, 1351-52 (Fed. Cir. 2004); Brown & Williamson Tobacco Co. v. Philip Morris, Inc., 229 F.3d 1120, 1121 (Fed. Cir. 2000); see also KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1740 (2007). When claim elements are found in more than one prior art reference, the Examiner must determine "whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims." In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006). While the KSR Court rejected a rigid application of the teaching, suggestion, or motivation ("TSM") test in an obviousness inquiry, the Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. Takeda Chem. Indus. et al. v. Alphapharm et al., No. 06-1329 (Fed. Cir. 2007).

The Examiner has relied on no fewer than five references to make a final rejection based on obviousness. As the Examiner is no doubt aware, "[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741. The Examiner cannot pick and choose individual elements from multiple references to recreate the invention. Polaroid Corp. v. Eastman Kodak Co., 229 U.S.P.Q. 561 (Fed. Cir. 1995), cert. denied, 479 U.S.

850 (1996). Rather "particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

Here, the Examiner has provided five references that are asserted to, collectively, make the invention of Applicants' disclosure obvious, but has failed to provide any reason that one of ordinary skill in the art would have combined these five references to achieve Applicants' invention. This lack of motivation is compounded by the fact that the Examiner errs by starting with a traditional rockwool material as the basis for this rejection, despite the fact that Applicants have distinguished this invention from conventional rockwool in numerous regards, and such differences are highlighted in part by Applicants' Figure 3. Rockwool typically exhibits a density greater than 80 kg/m<sup>3</sup>, and is highly incompressible. (See [0008] of Patent Application Publication No. 2008/0014422). The use of binding agents makes the insulating material more brittle and even less compressible. But despite this error, even the Examiner admits the rockwool references relied upon are silent as to: (a) binding agent; (b) fiber diameters  $\leq 4 \mu\text{m}$ ; (c) weight in the range of 0.8 to 1.8 kg/m<sup>2</sup>; and (d) composition as claimed by Applicants. Thus the need to rely on four additional references to finally reject all pending claims.

Jensen et al. is relied upon as disclosing conventional binder materials used in an amount from 0.5 to 4%. However, this use of Jensen as a teaching reference is improper as well, particularly because the absolute amount of binder affects not only the density but also the compressibility. This is evidenced by the Examiner's own statements in the November 10, 2009 Office Action, where the Examiner views "density as dependent on the composition and further processing of orifices..." (See page 4). The Examiner then states that "the compression ratio is dependent on the thickness of the mineral fiber and may be adjusted accordingly..." (See page 5). The Examiner then concludes that the surface weight, as claimed in Claim 1, would thereby be the same as the prior art relied upon in this final rejection.

Applicants' assert that these two statements are at odds with each other, and that Examiner's position as a result is untenable. First, density of insulating material comprised of minerals is not dependent solely on the composition and the processing of orifices – nor is the compression ratio dependent solely on the thickness of the material. And second, one of ordinary skill in the art cannot vary the density of the insulating material by processing orifices while at the same time reduce the compression ratio by varying the thickness. In essence, the Examiner's

position ignores the fact that reducing the absolute amount of binding agent results in a considerably reduced gross density, and in turn results in a considerably reduced fire load factor. None of the references speak to the problem of having a relatively thin, less dense insulating material, which has the compressibility ratios of Claims 1 and 5.

The Examiner has identified a single reference that speaks to improved compressibility, citing a ratio of 4.5:1. But Claim 1 comprises a significant reduction of the compressibility of the insulating material more than double this cited level of compressibility. And as claimed in Claim 6, the insulating material also evidences an improved thermal conductivity which the traditional rockwool references cannot. The references relied upon by the Examiner do not suggest that one of ordinary skill in the art would be motivated to combine a lower density, highly compressible insulating material to achieve improved thermal conductivity.

Reliance on Trabbold and Audren do not Cure this Deficiency

The Examiner appears to rely on Trabbold and Audren to fill in the gaps evident in Jensen, Vignesoult and Battigelli. The Examiner relies on Trabbold et al. to suggest that a product having finer fibers can be less dense than one of coarse fibers, yet result in same insulating values. Thus, the Examiner appears to take the position that because Trabbold says finer fibers generally equal lower density, then it follows it would have been obvious for a person of ordinary skill in the art to provide the composition claimed in Claim 14, but with less binding agent to achieve a lower gross density. But the references are completely silent as to using the claimed composition with reduced absolute binder content to decrease surface weight and density, and improve compressibility.

Jensen et al. is used as teaching reference to teach the use of binders in mineral wool materials in order to decrease the brittleness of the material. (The Examiner admits that the "motivation to combine Jensen et al. to Battigelli stems from the fact that binding agents allow for an increase in strength and decrease in brittleness when the material undergoes compression for shipping" and Trabbold does not suggest that modifying binder content for any other reason than to address brittleness). Brittleness is not a motivating factor here. This invention is not the result of mere trial and error, and would not have been obvious to one of ordinary skill in the art.

Finally, the Examiner notes that Battigelli discloses the formation of beads may be reduced by optimizing blower pressure. Therefore, the Examiner it would have been obvious to one of ordinary skill in the art to adjust the blower pressure to minimize the formation of beads.

But the Applicants have claimed a significant reduction of less than 1% total weight of the insulating material.

Amended Claims are in Condition for Allowance

Applicants have amended Claims 1, 3, 5, 12 and 14 by this Amendment after Final. As seen in Claim 1, the compressibility of the insulating element having a gross density of  $50\text{kg/m}^3$  has a minimum ratio of 2:1. This Amendment was necessitated by the Examiner's comments in Paragraph 17 of the Final Office Action, and to simplify the nature of this claim limitation. If there is still confusion about the nature of this limitation, or the compressibility of the insulating element as reflected in Claims 1 or 5, the Examiner is invited to telephone the undersigned. Furthermore, Claim 3 has been amended to specifically recite the preferred embodiment disclosed in this Application, namely an insulating element where the binder is within the range of .5 to 2% of the total weight of the insulating element. As the Examiner has noted, the prior art only discloses binder content in the range of 3 to 4% of total weight. Therefore, Claim 3 is now in condition for allowance.

Claims 12 and 14 have been amended to correct minor typographical errors only. As both of these claims depend from Claim 1, and Claim 1 overcomes the prior art of record, these claims are also believed to be in condition for allowance.

**CONCLUSION**

Examiner has failed to make a prima facie case of obviousness and the prior rejection of previously submitted and amended Claims cannot be sustained. Furthermore, Applicants have amended Claims 1, 3, 5, 12 and 14 and those amendments overcome the prior art of record. The remaining claims depend from one of these Claims. A timely notice of allowance of these amended claims is respectfully requested. As discussed during the brief telephone interview between the Examiner and the undersigned, if a telephone conference would expedite the allowance of this application, the Examiner is invited to call the undersigned on or before March 17, 2010.

Respectfully submitted,

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